Substitute for form 1449A/PTO				Complete if Known		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	09/894,985	
				Filing Date	June 27, 2001	
Si	TATEMENT	BY A	PPLICANT	First Named Inventor	Allen BORONKAY	
(use as many sheets as necessary)				Group Art Unit	Unassigned	
(abe as many sheets as necessary)				Examiner Name	Unassigned	
Sheet	1	of	3	Attorney Docket Number	IMMR-059/00US	

						PTO/SB/08A (08-0	
				U.S. PA	TENT DOCUMENTS		
Examiner	Cite No.1	U.S. Patent Do		Code ²	Name of Patentee or Applicant of Cited Document	Date of Publication of Cite	
Initials*			(if known)			Document white-DD-1111	
all	Al	5,785,630			Bobick, et al.	07/28/1998	
, ,	A2	5,766,016			Sinclair et al.	06/16/1998	
	A3	5,547,382			Yamasaki et al.	08/20/1996	
	A4	5,466,213			Hogan et al.	11/14/1995	
	A5	5,334,027			Wherlock	08/02/1994	
	A6	5,309,140			Everett, Jr., et al.	05/03/1994	
	A7	5,299,810			Pierce et al.	04/05/1994	
	A8	5,275,174			Cook	01/04/1994	
	A9	5,271,290			Fischer	12/21/1993	
	A10	5,240,417			Smithson et al.	08/31/1993	
	A11	5,212,473			Louis	05/18/1993	
	A12	5,078,152			Bond et al.	01/07/1992	
	A13	5,038,089			Szakaly	08/06/1991	
	A14	5,035,242			Franklin et al.	07/30/1991	
	A15	5,022,407			Horch et al.	06/11/1991	
	A16	5,019,761			Kraft	05/28/1991	
	A17	4,934,694			McIntosh	06/19/1990	
	A18	4,930,770			Baker	06/05/1990	
	A19	4,891,764			McIntosh	01/02/1990	
	A20	4,794,392			Selinko	12/27/1988	
	A21	4,713,007			Alban	12/15/1987	
	A22	4,708,656			de Vries et al.	11/24/1987	
	A23	4,599,070			Hladky et al.	07/08/1986	
	A24	4,581,491			Boothroyd	04/08/1986	
	A25	4,513,235			Acklam et al.	04/23/1985	
	A26	4,236,325		-	Hall et al.	12/02/1980	
	A27	4, 160,508			Salisbury, Jr.	07/10/1979	
	A28	3,911,416			Feder	10/07/1975	
	A29	3,903,614			Diamond et al.	09/09/1975	
\neg	A30	3,902,687			Hightower	09/02/1975	
	A31	3,623,064			Kagan	11/23/1971	
	A32	3,517,446	 	·	Corlyon et al.	06/30/1970	
	A33	3,497,668	-		Hirsch	02/24/1970	
	A34	3,220,121			Cutler	11/30/1965	
-M	A35	3,157,853	 	· · -	Hirsch	11/17/1964	
	Pioo	3,107,033	F	OREIGN	PATENT DOCUMENTS	11/1//1904	
Examiner	Cite	Foreign Patent D	ocument		T.	D. CD.III	
nitials*	No.1	· · · ·		ind Code ⁵ if known)	Name of Patentee or Applicant of Cited	Date of Publication of Cited Document MM-DD-YYYY	
ΛH	BI	0 349 086		AI	Stork Kwant B.V.	01/03/1990	
- ~ -		† · · · † · · · · · · · · · · · · · · ·					

Unique citation designation number.
 See attached Kinds of U.S. Patent Documents.
 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).
 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.
 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.
 Applicant is to place a check mark here if English language Translation is attached.

Complete if Known Substitute for form 1449A/PTO 09/894,985 Application Number INFORMATION DISCLOSURE Filing Date June 27, 2001 STATEMENT BY APPLICANT First Named Inventor Allen BORONKAY **Group Art Unit** Unassigned (use as many sheets as necessary) **Examiner Name** Unassigned Sheet 2 of 3 Attorney Docket Number IMMR-059/00US

Examiner	Cite	OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book,	T ²			
nitials*	No.1	magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				
all	C1	Baigrie, "Electric Control Loading – A Low Cost, High Performance Alternative," Proceedings of Interservice/Industry Training Systems Conference, pp. 247-254, November 6-8, 1990				
1	C2	Iwata, "Pen-based Haptic Virtual Environment," 0-7803-1363-1/93 IEEE, pp. 287-292, 1993				
	C3	Russo, "The Design and Implementation of a Three Degree of Freedom Force Output Joystick," MIT Libraries Archives pp. 1-131, May 1990, archived 8/14/90				
	C4	Brooks et al., "Hand Controllers for Teleoperation - A State-of-the-Art Technology Survey and Evaluation," JPL Publication 85-11, NASA-CR-175890; N85-28559, pp. 1-84, 03/1/1985				
	C5	Jones et al., "A perceptual analysis of stiffness," ISSN 0014-4819 Springer International (Springer-Verlag); Experimental Brain Research, Vol. 79, No. 1, pp. 150-156, 1990				
	C6	Burdea et al. , "Distributed Virtual Force Feedback, Lecture Notes for Workshop on Force Display in Virtual Environments and its Application to Robotic Teleoperation," 1993 IEEE International Conference on Robotics and Automation, pp. 25-44, 05/02/1993				
	C7	Snow et al., 'Model-X Force-Reflecting-Hand-Controller,' NT Control No. NPO-17851; JPL Case No. 7348, pp. 1-4 with 45 pages of attachments, 06/15/1989				
	C8	Ouh-Young, "Force Display in Molecular Docking," Doctoral Dissertation, University of North Carolina at Chapel Hill, UMI Order No. 9034744, p. 1-369, 1990				
	C9	Tadros, "Control System Design for a Three Degree of Freedom Virtual Environment Simulator Using Motor/Brake Pair Actuators," MIT Archive, pp. 1-88, February 1990, archived 8/13/90				
	C10	Caldwell et al., "Enhanced Tactile Feedback (Tele-Taction) Using a Multi-Functional Sensory System," 1050-4729/93, pp. 955-960, 1993				
	C11	Adelstein et al., "Design and Implementation of a Force Reflecting Manipulandum for Manual Control research," DSC-Vol. 42, Advances in Robotics, pp. 1-12, 1992				
	C12	Gotow et al., "Controlled Impedance Test Apparatus for Studying Human Interpretation of Kinesthetic Feedback," WAII-11:00, pp. 332-337				
	C13	Stanley et al., "Computer Simulation of Interacting Dynamic Mechanical Systems Using Distributed Memory Parallel Processors," DSC-Vol. 42, Advances in Robotics, pp. 55-61, ASME 1992				
	C14	Russo, "Controlling Dissipative Magnetic Particle Brakes in Force Reflective Devices," DSC-Vol. 42, Advances in Robotics, pp. 63-70, ASME 1992				
	C15	Kontarinis et al., "Display of High-Frequency Tactile Information to Teleoperators," <i>Telemanipulator Technology and Space Telerobotics</i> , Won S. Kim, Editor, Proc. SPIE Vol. 2057, pp. 40-50, Sep. 7-9, 1993				
	C16	Patrick et al., "Design and Testing of A Non-reactive, Fingertip, Tactile Display for Interaction with Remote Environments," Cooperative Intelligent Robotics in Space, Rui J. deFigueiredo et al, Editor, Proc. SPIE Vol. 1387, pp. 215-222, 1990				
	C17	Adelstein, "A Virtual Environment System For The Study of Human Arm Tremor," <i>Ph.D. Dissertation</i> , Dept. of Mechanical Engineering, MIT, June 1989, archived 3/13/90				
	C18	Bejczy , "Sensors, Controls, and Man-Machine Interface for Advanced Teleoperation," <i>Science</i> , Vol. 208, No. 4450, pp. 1327-1335, 1980				
	C19	Bejczy et al. , "Generalization of Bilateral Force-Reflecting Control of Manipulators," <i>Proceedings Of Fourth CISM-IFTOMM</i> , Sep. 8-12, 1981				
	C20	McAffee et al., "Teleoperator Subsystem/Telerobot Demonstrator: Force Reflecting Hand Controller Equipment Manual," JPL 1988, JPL D-5172				
	C21	Minsky, "Computational Haptics: The Sandpaper System for Synthesizing Texture for a Force-Feedback Display," Ph.D. Dissertation, MIT, June 1995, archived 7/6/95				
	C22	Jacobsen et al., "High Performance, Dextrous Telerobotic Manipulator With Force Reflection," Intervention/ROV '91 Conference & Exposition, Hollywood, Florida, May 21-23, 1991				
	C23	Shimoga, "Finger Force and Touch Feedback Issues in Dexterous Telemanipulation," Proceedings of Fourth Annual Conference on Intelligent Robotic Systems for Space Exploration, Rensselaer Polytechnic Institute, Sep. 30- Oct. 1, 1992				
	C24	IBM Technical Disclosure Bulletin, "Mouse Ball-Actuating Device With Force and Tactile Feedback," Vol. 32, No. 9B, February 1990				
	C25	Terry et al., "Tactile Feedback In A Computer Mouse," Proceedings of Fourteenth Annual Northeast Bioengineering Conference, University of New Hampshire, March 10-11, 1988				
\bot	C26	Howe, "A Force-Reflecting Teleoperated Hand System for the Study of Tactile Sensing in Precision Manipulation," Proceedings of the 1992 IEEE International Conference on Robotics and Automation, Nice, France, May 1992	<u> </u>			
4/	C27	Eberhardt et al., "OMAR - A Haptic display for speech perception by deaf and deaf-blind individuals," IEEE Virtual Reality Annual International Symposium, Seattle, WA, Sep. 18-22, 1993				

Complete if Known Substitute for form 1449A/PTO **Application Number** 09/894,985 INFORMATION DISCLOSURE Filing Date June 27, 2001 STATEMENT BY APPLICANT First Named Inventor Allen BORONKAY **Group Art Unit** Unassigned (use as many sheets as necessary) **Examiner Name** Unassigned Sheet 3 of 3 Attorney Docket Number IMMR-059/00US

OH	C28	Rabinowitz et al., "Multidimensional tactile displays: Identification of vibratory intensity, frequency, and contractor area," Journal of The Acoustical Society of America, Vol. 82, No. 4, October 1987		
	C29	Bejczy et al., "Kinesthetic Coupling Between Operator and Remote Manipulator," International Computer Technology Conference, The American Society of Mechanical Engineers, San Francisco, CA, August 12-15, 1980		
	C30	Bejczy et al., "A Laboratory Breadboard System For Dual-Arm Teleoperation," SOAR '89 Workshop, JSC, Houston, TX, July 25-27, 1989		
	C31	Ouhyoung et al., "A Low-Cost Force Feedback Joystick and Its Use in PC Video Games," <i>IEEE Transactions on Consumer Electronics</i> , Vol. 41, No. 3, August 1995		
	C32	Marcus, "Touch Feedback in Surgery," Proceedings of Virtual Reality and Medicine The Cutting Edge, Sep. 8-11, 1994		
	C33	Bejczy, et al., "Universal Computer Control System (UCCS) For Space Telerobots," CH2413-3/87/0000/0318501.00 1987 IEEE, 1987		

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

164027 v1/RE 3\$KB01!.DOC

Considered by Amy He

Date 5/3/04

¹ Unique citation designation number.

² Applicant is to place a check mark here if English language Translation attached.